

ABSTRACT OF THE DISCLOSURE

5 An improved tough, transparent polymer alloy
comprised of 90 to 20 weight percent of a brittle
polymer with a weight average molecular weight
greater than 180,000; 0 to 60 weight percent of a
rubbery polymer; 0 to 80 weight percent of a ductile
polymer; and between greater than 0.4, i.e. between
10 0.5 and 3 weight percent of a plasticizer, i.e.
mineral oil which resides in the brittle polymer.
The brittle polymer can have molecular weights
between 220,000 and 300,000, and may be as high as
400,000. In one of the preferred embodiments the
15 brittle polymer is a copolymer of styrene and methyl
methacrylate which copolymer ranges between 50 and
55 weight percent, the rubbery polymer is 0 weight
percent, the ductile polymer is a styrene butadiene
block copolymer ranging between 45 and 50 weight
20 percent, and the mineral oil is 1.5 weight percent.
Notched IZOD impact strength ranges between 1.0 to
6.0 ft-lb./in., preferably between 2.0 and 4.5 ft-
lb./in. The haze can be less than 1.5% or it can be
between 1 and 4%.

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